

PCT

WORLD INTELLECTUAL PROPERTY ORGANIZATION  
International Bureau



INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification <sup>7</sup> : <b>G09G 3/36, 3/20</b>	A1	(11) International Publication Number: <b>WO 00/38168</b> (43) International Publication Date: <b>29 June 2000 (29.06.00)</b>
(21) International Application Number: <b>PCT/GB99/04277</b>		(81) Designated States: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).
(22) International Filing Date: <b>16 December 1999 (16.12.99)</b>		
(30) Priority Data: <b>9827944.1 19 December 1998 (19.12.98) GB</b>		
(71) Applicant ( <i>for all designated States except US</i> ): THE SECRETARY OF STATE FOR DEFENCE [GB/GB]; Defence Research and Evaluation Agency, Ively Road, Farnborough, Hampshire GU14 0LX (GB).		
(72) Inventors; and		<b>Published</b>
(75) Inventors/Applicants ( <i>for US only</i> ): COKER, Timothy, Martin [GB/GB]; 4 Brewery Court, South Road, Oundel, Peterborough PE8 4DZ (GB). CROSSLAND, William, Alden [GB/GB]; University of Cambridge, Engineering Department, Trumpington Street, Cambridge CB2 1PZ (GB).		<i>With international search report. Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.</i>
(74) Agents: GODDARD, David, John; Harrison Goddard Foote, 1 Stockport Road, Marple, Stockport SK6 6BD (GB) et al.		

(54) Title: FAST READOUT OF MULTIPLE DIGITAL BIT PLANES FOR DISPLAY OF GREYSCALE IMAGES

(57) Abstract

In a method of signal processing for greyscale imaging in which weighted bitplanes corresponding to a greyscale image are stored as binary strings in sequential locations in a memory, in decreasing order of intended duration (weighting), a number of read passes equal to the number of weighted bitplanes are made from the set of stored bitplanes, each pass commencing with the highest order bitplanes and continuing along the stored bitplanes in sequence, the lengths of the sequences being varied and selected such that at the end of the said number of read passes each bit plane has been read out a plurality of times proportional to or equal to its duration (weighting). The method has utility in driving high speed liquid crystal matrix arrays particularly where each bitplane needs to be refreshed. A small ac potential may be applied to the array between writing steps.